FIG. 1A

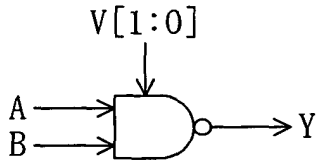

FIG. 1B

V[1:0] (OUTPUT STATE)		A	B	Y
LL	(Hi-Z)	don't care	don't care	X
LH	(1.2V)	L	L	H
		L	H	H
HL	(1.5V)	H	L	H
HH	(1.8V)	H	H	L

FIG. 1C

TRANSITION OF INPUT SIGNALS		DELAY VALUE FOR EACH STATE OF V[1:0] (ns)		
V[1:0]	(A, B)	LH (1.2V)	HL (1.5V)	HH (1.8V)
≠LL	LH→HH	Alh(Vlh)	Alh(Vhl)	Alh(Vhh)
	HH→LH	Ahl(Vlh)	Ahl(Vhl)	Ahl(Vhh)
	HL→HH	Blh(Vlh)	Blh(Vhl)	Blh(Vhh)
	HH→HL	Bhl(Vlh)	Bhl(Vhl)	Bhl(Vhh)
LL→≠LL	XX	Vst(Vlh)	Vst(Vhl)	Vst(Vhh)
≠LL→LL	XX	Voff(Vlh)	Voff(Vhl)	Voff(Vhh)

FIG. 2A

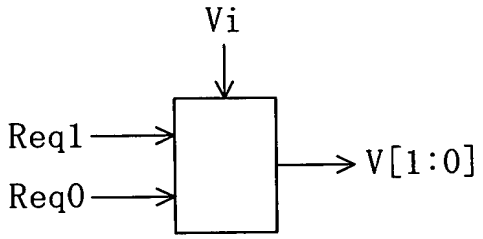

FIG. 2B

Vi (INPUT STATE)	Req1	Req0	V[1:0] (OUTPUT STATE)
L (Hi-Z)	don't care	don't care	LL (Hi-Z)
H (3V)	L	L	LL (Hi-Z)
	L	H	LH (1.2V)
	H	L	HL (1.5V)
	H	H	HH (1.8V)

FIG. 2C

TRANSITION OF INPUT SIGNAL		DELAY VALUE (ns)
Vi	(Req1, Req0)	
H	LL→LH LL→HL LL→HH	Vst
	LH→LL HL→LL HH→LL	Voff
	OTHER THAN THE ABOVE	Vtr
L→H	≠LL	Vist
H→L		Vioff

FIG. 3

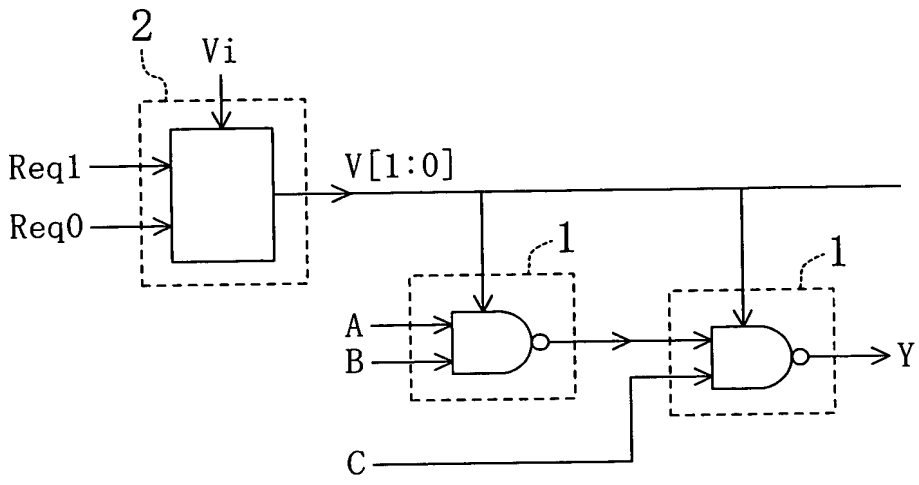

FIG. 4A

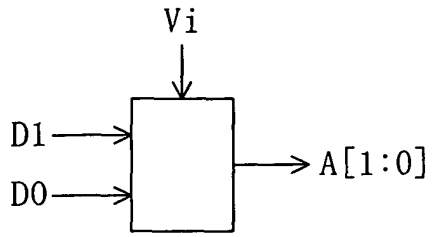

FIG. 4B

Vi (INPUT STATE)		D1	D0	A[1:0] (OUTPUT STATE)	
L	(Hi-Z)	don't care	don't care	X	(Hi-Z)
H	(3V)	L	L	LL	(0.5V)
		L	H	LH	(1V)
		H	L	HL	(1.5V)
		H	H	HH	(2V)

FIG. 4C

TRANSITION OF INPUT SIGNAL		DELAY VALUE (ns)
Vi	(D1, D0)	
H	ANY CHANGE OF STATE	Atr
L→H	ANY STATE	Ast
H→L	ANY STATE	Aoff

FIG. 5A

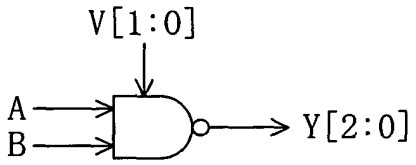

FIG. 5B

V[1:0]	(OUTPUT STATE)	A	B	Y[2:0]
LL	(Hi-Z)	don't care	don't care	XXX
LH	(1.2V)	L	L	LHH
		L	H	LHH
		H	L	LHH
		H	H	LHL
HL	(1.5V)	L	L	HLH
		L	H	HLH
		H	L	HLH
		H	H	HLL
HH	(1.8V)	L	L	HHH
		L	H	HHH
		H	L	HHH
		H	H	HHL

FIG. 6A

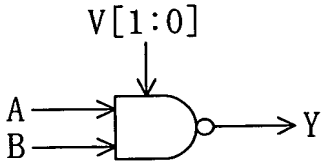

FIG. 6B

V[1:0] (OUTPUT STATE)		A	B	Y
LL	(Hi-Z)	don't care	don't care	X
LH HL HH	(1.2V) (1.5V) (1.8V)	L	L	H
		L	H	H
		H	L	H
		H	H	L

FIG. 6C

TRANSITION OF INPUT SIGNAL		DELAY VALUE FOR EACH STATE OF V[1:0] (ns)		
V[1:0]	(A, B)	LH (1.2V)	HL (1.5V)	HH (1.8V)
≠LL	LH→HH HH→LH	Alh(Vlh)	Alh(Vhl)	Alh(Vhh)
		Ahl(Vlh)	Ahl(Vhl)	Ahl(Vhh)
	HL→HH HH→HL	Blh(Vlh)	Blh(Vhl)	Blh(Vhh)
		Bhl(Vlh)	Bhl(Vhl)	Bhl(Vhh)
LL→≠LL	XX	Vst(Vlh)	Vst(Vhl)	Vst(Vhh)
≠LL→LL	XX	Voff(Vlh)	Voff(Vhl)	Voff(Vhh)

FIG. 6D WITHSTAND VOLTAGE: 1.7V

FIG. 7A
PRIOR ART

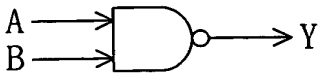

FIG. 7B
PRIOR ART

A	B	Y
L	L	H
L	H	H
H	L	H
H	H	L

FIG. 7C
PRIOR ART

A→Y	DELAY VALUE AYns
B→Y	DELAY VALUE BYns

FIG. 8A

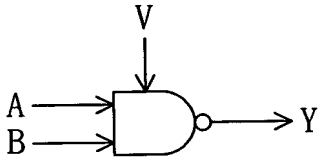

FIG. 8B

V	A	B	Y
L	don't care	don't care	X
H	L	L	H
	L	H	H
	H	L	H
	H	H	L

FIG. 8C

A→Y	DELAY VALUE AYns
B→Y	DELAY VALUE BYns
V→Y	DELAY VALUE VYns